



**HEADQUARTERS  
CIVIL AIR PATROL VIRGINIA WING  
UNITED STATES AIR FORCE AUXILIARY**



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**COMMANDERS PLEASE POST**

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**WING BULLETIN:** It is very important that you share this Newsletter with all Members of your Unit. Please review this material at your unit meeting and post a copy on your Bulletin Board so that it will be available to ALL members. (Members can't participate if you do not tell them about upcoming events). This Bulletin is posted on the Virginia Wing Website as a PDF document. **\*\*All reports are listed on the Virginia Paperless Wing Website. Please have your officers refer to the calendar for report dates.**

- 1. Operations** – Winter operations directly affect the Readiness of VAWG aircraft. I have asked Frank Haas, one of our VAWG Maintenance Officers, and a retired TWA Lead Mechanics, to provide suggestions for the safe removal of frost, ice and snow from our aircraft. His article is posted below.

To insure our Incident Commanders are fully aware of the exact status of mission-ready VAWG aircraft, I have requested Aircraft Custodial Commanders post on the Paperless Web Site any aircraft that cannot be considered Mission ready due to frost, ice or snow. Time is critical when REDCAPS are initiated and assigning an aircrew to an aircraft that is snow covered could compromise the success of the Mission.

Jim Truxel, LtCol, CAP  
VAWG / DO

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**Winter operations**

Winter operations pose many problems for airplane operators. Hard

engine starting leads the list. Keeping the battery charged and the water level at proper levels helps make engines easier to start. Keeping a heat source in the engine compartment does wonders for the starting procedure. Frost, snow, and ice give major problems when the airplane is parked out side.

Frost - This is a thin covering of frozen particles, which have adhered to the upper surfaces of the aircraft. The frost presents a rough face for the air moving over the wing. The lift of the wing is reduced to the point that takeoffs may not be possible. A few minutes in the sun with the temperature above freezing and will melt the frost. A warm hanger may be a nice substitute to the sun, or maybe a water hose if the temperature is not too far below freezing. DO NOT SCRAPE.

Snow - A cold snow on a dry surface may be brushed or broomed off. Be careful of sharp edges of metal or plastic. Damage to the paint or metal skin can happen very easily. The windshield is more readily subject to this kind of damage. A rough cloth will leave unkind streaks on the windshield.

Ice – This is a different ball game and is bad stuff. Best left to a warmer day. When ice adheres to the surface, it is like glue. If a soft brush or broom does not remove the ice, prying will only lead to skin damage. If, by chance, you can get a fingernail under the ice and lift it, go ahead. Enjoy, cold fingers and all. This will not hurt the skin. Be mindful, damaged skin or paint is not an acceptable alternative to removing ice from the surface of a CAP vehicle or airplane.

Points to ponder:

A picture in a recent issue of SPORT AVIATION showed a Piper J-3 with the aft wing strut folded and the trailing edge hanging down, the rear spar attachment had also failed. There was approximately a foot or so of snow on top of the wing. Location not indicated. After a heavy snow, you might want to check your airplane and remove the snow, enabling you to be mission ready when the call is made.

To remove snow and ice from large airplanes, a mixture of water and ethylene glycol is heated to 180 Deg and sprayed all over the airplane. Vehicles designed for this purpose are used. Ice removal became very serious after an airplane departed DCA and later impacted the 14th Street Bridge, a very sad event. The mother of a former Fredericksburg cadet was one of the victims.

## **2. Maintenance –**

Item 1 – The C 172 cowling screws that secure the nose bowl sections together, will loosen up; as a result, they eventually fall out. Should this happen, you and the airplane are at serious risk. In this particular incident, all the screws fell out and part of the fiber cowling was damaged. The danger in this kind of incident is that the whole top of the cowling can be lifted up causing airflow and vision problems. Or it could wrap around the fin. This is a serious problem. As a pilot, you need to make sure the cowling screws are secure. They do not need to be torqued up like a wheel nut, but the screws must be secure. Part of your flight kit should include, among others, a multi-tip screw driver, flat and phillips tips.

Item 2 – Recently, it was noted that the Registration Certificate for the airplane was pasted to the side doorframe with clear plastic tape; it was barely legible. The Airworthiness Certificate was also barely legible. Both certificates should be in the clear plastic folder by the pilots left knee. Each folder should be placed in a plastic sandwich bag for protection; just in case water drips in from a windshield leak. Replacement can be from an FAA FSDO. RIC, IAD, and HGR, you need to call and make an appointment for the exchange. You need to personally bring the old certificate and exchange it for the new one. This can only be done in person.

Item 3 – When an ELT unit is replaced, the new unit will have a switch on the instrument panel for testing and shutting off. The ELT battery is now a 5-year battery. The new cost is about \$800.00

Item 4 – Brakes, again. The discs may look good from a standing position, but you should feel the rotor; a recent brake check had indications of a lot of wear. Looking down, the brake may look new, but the feel test may reveal a ridge of 1/16 inch. Several years ago, a C - 210 landed at EZF in a shower of sparks. The left wheel looked like a fourth of July sparkler going down the runway. The disc had separated from the cone attached to the wheel bolts. The discs have a mass, which can dissipate the heat generated in the stopping procedure. If part of the mass is gone, higher disc temperatures. The brake was shot a long time before this particular landing. Another consideration is with a 10,000 feet of runway is in front of you, do you really need to do a high-energy stop. The hardest stress on an airplane is a high-energy stop.

## **3. HEALTH SERVICES**

Cold Weather Injury Prevention

Sunburn--yes, even in winter; prevent by wearing an alcohol free sunscreen (SPF 15+).

Snow Blindness--wear polarized sunglasses that blocks 90% UV Rays.

Dry Chapped Skin--apply lip balm to lips. Dab petroleum jelly on problem areas to seal in moisture and heal very dry skin. After washing hands, immediately put on hand cream to seal in moisture and wear a scarf or balaclava to protect skin.

Dehydration--drink plenty of water to stay well hydrated. Caffeine consumption can make you dehydrated.

Nutrition--eat well-balanced meals to stay healthy in cold weather.

Chilblain--happens when bare skin is exposed to cold, humid air. Wear appropriate clothing in layers (traps air and keeps you insulated), use gloves, wear warm footwear. Exercise indoors and avoid cold exposure.

Frostbite--freezing of tissue and body parts. Keep clothing clean and dry. Cover the face and ears.

Hypothermia--a decrease of body core temperature. Avoid prolonged exposure to cold environment.

Tips on how to dress for the cold.

Wear layers of loose fitting, lightweight, warm clothing. Outer garments should be tightly woven, water repellent, and hooded. Wear a hat; 40% of body heat can be lost from your head. Cover your mouth to protect lungs from extreme cold. Mittens, snug at the wrist, are better than gloves. Try to stay out of the wind.

## IMPORTANT

Senior Members, please remind cadets that wear of civilian outer garments are APPROVED to be worn over their uniforms, but must be removed when indoors. Everyone should use good judgment in choosing appropriate garments for wear based on weather conditions and duties.

Keep warm and keep well this winter.

Monica Richardson, LtCol, CAP  
Va Wing HSO

#### **4. Safety – If it concerns you, ask...**

We have heard many times that safety is the responsibility of each individual. One way to fulfill that responsibility is to note and pass along safety concerns to responsible parties.

Such reporting can be informal or more formal using such forms as the CAP Form 26 or the FAA Form 8740-5. In general, the FAA form is used to report concerns related to the operation of aircraft, including airport hazards, markings, fueling problems, runway and taxiway conditions, lighting problems, etc.

The CAP form can be used to report safety concerns related to any kind of CAP activity, not limited to flight operations concerns, including the actions and instructions of activity leaders that might lead to a hazardous situation.

The forms are required to be available at all CAP units as a part of the safety program. If the forms are not available at your unit meeting place, please ask the unit commander or safety officer about correcting that situation.

Please become familiar with those forms and their use or review them again to refresh your knowledge – instructions for their use are available on the forms. And remember, as well, that reporting a concern need be no more formal than raising it to a responsible person in the unit or at the activity.

#### **5. AEROSPACE EDUCATION (AE)**

The year 2006 should be a big one in AE activity. Already being planned for early in the year is a Cadet AE Workshop for the weekend 17-19 February at Wing Headquarters and an Aerospace Education Member (AEM) Workshop at the Hazy Center on 18 March. Also being planned is a joint Cadet and Senior Member Workshop to be held this summer at Wing Headquarters. We could have training sessions on the Satellite Tool Kit (STK) and perform Cadet Orientation rides during the event in addition to model rocketry and teaching the Aerospace Dimension Modules.

The 4<sup>th</sup> Quarter (AE) report and final report of the year is due to me by 10 January 2006. If you haven't sent it to me yet please do it as soon

as possible. This is the final and probably most important report of the year. Copies of the report form can be downloaded from the Paperless Wing as the attachment to the VAWG Supplement to CAPR 280-2. I have received Plans of Action (POA's) from several units to date. Thanks to the AEO's that took time to develop these.

The date for submission of nominations for the Brewer Awards is 15 January 2006. I will also need your A. Scott Crossfield Teacher of the Year nominations by this date.

The National Conference on Aviation and Space Education (NCASE 2006) will be held at the Crystal Gateway Marriott in Arlington, Virginia 19-21 October 2006. Please save these dates. It promises to be a big event next year with significant improvements to those held in the past. You can get a full description of the convention on the web site [www.ncase.info](http://www.ncase.info).

A member of the Wing AE Staff would like to pay a visit to your unit this year. This may be conjunction with a Unit Inspection or as a Staff Assistance Visit. Please let Major Bert Jones or myself know when we can schedule something. We will probably need at least a month's notice. Lt Col David C. Scull, VAWG DAE, 7897 Wellington Drive, Warrenton, VA 21086, Ph: 540 349-9310, E-mail: [kd4sv@arri.net](mailto:kd4sv@arri.net). Major Albert L. Jones, VAWG Asst. Director for Internal AE, 370 Westview Lane, Heathsville, VA 22743 Ph: 804 580-5120, E-Mail: [uptheriver@rivnet.net](mailto:uptheriver@rivnet.net).

## **Newsbreak**

### **PRINCE WILLIAM COMPOSITE SQUARDOON**

Cadets Joshua Wofford, Jacob Elphee, and Geoffrey Berryman received the General Billy Mitchell Award in December. Cadet Wofford joined the Prince William Composite Squadron in August of 2003, and received the Wright Brothers Award in September of 2004. Cadet Elphee joined the squadron in November of 2003, and received the Wright Brothers Award in September of 2004 as well. Cadet Berryman joined the squadron in April of 2002, and earned his Mitchell in September of 2005.

In the year 2005, Prince William Composite Squadron cadets have earned 5 Wright Brother Awards and 6 General Billy Mitchell Awards.